APPROPRIATE ASSESSMENT SCREENING REPORT

IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6(3) OF THE EU HABITATS DIRECTIVE

Port Pier Extension Proposal

Inver Bay, Co. Donegal

Compiled by:

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For:

Donegal County Council

Piers and Harbours Section

County House

Lifford

Co.Donegal.

Contents

Report produced by:

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1.0 Introduction

This Screening Report has been prepared by Jessica Devlin MSc. Project Management and Environmental Services for Donegal County Council for the purpose of a planning permission application and foreshore licence application pertaining to proposed extension of Port Pier, Inver, Co. Donegal. This report has been compiled to provide the competent authority with adequate information to make an appropriate assessment of the Project under Article 6(3) of the Habitat Directives. It describes the proposed project and the receiving environment. The zone of likely influence will be identified and any Natura 2000 sites within that zone will be identified. Any possible negative direct or indirect impacts (before mitigation) on the Qualifying Interests (QI) of the Natura 2000 sites will be identified and the significance of the impacts will be assessed. This report follows the methodology set out in the Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4), E.C., 2002.

1.1 Screening and Appropriate Assessment

The introduction of the EU Birds Directive and the Habitats Directive in 1979 and 1992 respectively, made member states legally obliged to establish a Natura 2000 network of sites of highest biodiversity importance for rare and threatened habitats and species. This comprises Special Areas of Conservation (SACs, including candidate SACs), and Special Protection Areas (SPAs, including proposed SPAs). SACs are selected for the conservation of Annex I habitats (including priority types which are in danger of disappearance) and Annex II species (other than birds). SPAs are selected for the conservation of Annex I birds and other regularly occurring migratory birds and their habitats. The annexed habitats and species for which each site is selected correspond to the qualifying interests of the sites; from these the conservation objectives of the site are derived.

Articles 6(3) and 6(4) of the Habitat Directive 92/43/EEC require an Appropriate Assessment of plans and projects to prevent significant adverse effects on Natura 2000 sites. The Assessment must determine whether the plan or project is likely to have significant effects on the site and whether these effects will adversely affect the integrity of the site in terms of its nature conservation objectives.

Article 6(3) of the Habitats Directive states that:

"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."

The assessment can be broken down into 4 main stages:

Stage 1 - Screening: Results of preliminary impact identification and assessment of significance of impacts.

Stage 2 - Appropriate Assessment: Assessment of the impact on the integrity of the site(s) and assessment of mitigation measures (NIS Report).

Stage 3 - Assessment of alternative solutions.

Stage 4 - Imperative Reasons of Overriding Public Interest (IROPI): IROPI test and assessment of compensatory measures.

2.0 Statement of authority

Jessica graduated from the National University of Ireland, Galway in 1997 with a BSc. honours degree in Geology and obtained a MSc. in Applied Environmental Science from Queens University Belfast in 2001. She attained a National Certificate in Eco-Tourism, from Sligo Institute of Technology in 2005 and in 2014 completed Geographical Information Systems for Environmental Investigations, University College Dublin.

Over the years, Jessica has gained a wide range of experience in research, consultancy and project management with particular emphasis on sustainable development in freshwater, marine and coastal environments.

As field scientist with the Queens University Marine Station in Portaferry, Jessica carried out habitat surveys with respect to the decline of Salmonid populations in Northern Ireland Rivers. She progressed to research assistant with Queens University and the Department of Agriculture & Rural Development. As project manager for the Donegal County Council - Marine & Water Leisure Programme, she managed projects on sustainable development of the marine leisure product. Jessica also worked with the University College Cork Coastal and Marine Research Centre in partnership with Donegal County Council and the University of Ulster, as manager of the Donegal element of a North West Europe Interreg Project called IMCORE (Innovative Management of Europe's Changing Coastal Resource). For the past 10 years Jessica has been self-employed working as a project manager and environmental consultant, specialising in freshwater, marine, coastal and environmental projects. Her client base is wide reaching from state agencies to community groups, individuals, angling clubs and private developers.

She is a member of the Irish Whale and Dolphin Group and is an experienced Scuba Diver, who has dived frequently in the waters around St. John's Point, Co. Donegal.

3.0 Methodology

Liaison with Alan McCready and Cathal Sweeeney, Donegal County Council.

Liaison with Steve Gregan and Niel Verwoerd Ayesa Ltd.

Liaison with Gerry McCafferty, Inland Fisheries Ireland.

Site visit and walkover survey on 25 April 2023.

Desk research (list not exhaustive, see section 11 for full detail).

- Online data available on European sites and protected habitats/species as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie, including conservation objectives documents.
- Online data available on protected species as held by the National Biodiversity Data Centre (NBDC) from www.biodiversityireland.ie.
- Online data available on Irish Whale and Dolphin Group members page
- Information on www.catchments.ie and www.epa.ie with regard to water quality.
- This report has been prepared using the following guidance. A full list of research sources and references can be seen in section 11.
- Dept. of Environment Heritage and Local Government (2009) Appropriate Assessment of plans and projects, Guidance for planning authorities.
- European Commission Environment DG (2001) Assessment of plans and projects significantly affecting Natura 2000 sites, Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC November 2001.
- OPR Practice Note (March 2021) Appropriate Assessment Screening for Development Management.

4.0 Overview of project proposals

Port Pier, Inver is located on the northwestern shoreline of Inver Bay in southwest Donegal between the towns of Killybegs and Donegal Town. It is owned and maintained by Donegal County Council. Activity at Port Inver has increased and diversified over the years, however the pier facilities have not improved to any degree. Modern vessels have been introduced and require better facilities to maintain and care for them.

In order to improve the amenity provided by the pier, Donegal County Council are proposing to construct an extension to the existing pier to accommodate the recent increased activity and improve facilities at the pier. Works will involve the dredging of an area to the east of the pier, piling and associated construction works.

5.0 Overview of Natura 2000 sites

5.1 Zone of influence

The approach to screening is likely to differ somewhat for plans and projects, depending on scale and on the likely effects and should include any Natura 2000 sites within the likely zone of impact of the plan or project. The zone of influence of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a Natura 2000 site. This should be established on a case-by-case basis using the Source-Pathway-Receptor framework and not by arbitrary distances (such as 15 km) (OPR, 2021).

In the case of sites with water dependent habitats or species, and a plan or project that could affect water quality or quantity, for example, it may be necessary to consider the full extent of the upstream and/or downstream catchment." (NPWS, 2009)

In this case due to the scale and location of the project on the shores of Inver Bay, Natura 2000 sites within (if any), along and outside the Bay have been included in the zone of influence, see figure 5.1.

The Natura 2000 sites were then assessed in terms of whether a Source - Pathway - Receptor relationship existed, and screened out accordingly. Where no Source - Pathway- Receptor relationship is considered to exist these Natura 2000 sites are screened out and will not be discussed further in this report, see table 5.1.

The project is not in a Natura 2000 site but is hydrologically linked to Donegal Bay (Murvagh) SAC, Donegal Bay SPA and St. Johns Point SAC. The project is also in an area where Annex IV and Annex V species are known to occur.

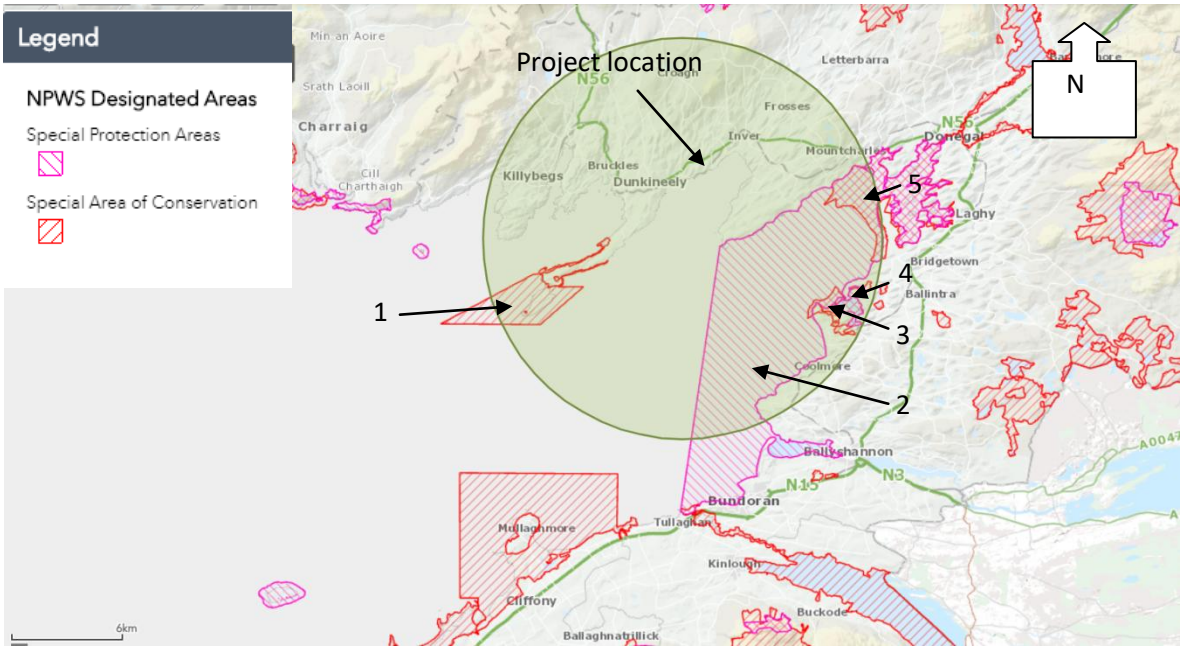

Figure 5.1. Zone of influence: Natura 2000 Sites around Inver Bay, Co. Donegal. (Map source: www.npws.ie accessed 04 May 2023 © ESRI, ©OSI)

Map Ref	Natura 2000 Site / (Site Code) / Distance from project (km)	Source Pathway Receptor Relationship Yes/No Screened IN/ OUT
1	**St John's Point (000191) 7km** Large shallow inlets and bays [1160] Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] Alkaline fens [7230] Limestone pavements [8240] Submerged or partially submerged sea caves [8330] Euphydryas aurinia (Marsh Fritillary) [10	Yes, Indirect hydrological link with sensitive marine QI's. No S-P-R with terrestrial QI's Screened IN for Marine QI's
2	**Donegal Bay SPA (004145) 4km** Great Northern Diver (Gavia immer) [A003] Light-bellied Brent Goose (Branta bernicla hrota) [A046] Common Scoter (Melanitta nigra) [A065] Sanderling (Calidris alba) [A144] Wetland and Waterbirds [A999]	Yes, indirect hydrological link with the SPA: Screened IN
3	**Durnesh Lough SAC (000138) 9km** Coastal lagoons [1150] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410]	No, S-P-R relationship not considered to exist with Coastal Lagoons due to the distances involved and dilution factor of the bay and the protected nature of the lagoon. Molinia Meadows are not in the project location. Screened OUT.
4	**Durnesh Lough SPA 9km** Whooper Swan (Cygnus cygnus) [A038] Greenland White-fronted Goose (Anser albifrons flavirostris) [A395]	No, S-P-R relationship not considered to exist due to the distances involved and the preferred habitat of the species within Durnesh Lough. Screened OUT.
5	**Donegal Bay (Murvagh) SAC (000133) 6km** Mudflats and sandflats not covered by seawater at low tide [1140] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] Dunes with Salix repens ssp. argentea (Salicion arenariae) [2170] Humid dune slacks [2190] Phoca vitulina (Harbour Seal) [1365]	Yes, Indirect hydrological and acoustic link with mobile species: Harbour Seal. S-P-R relationship not considered to exist with other habitats due to the distances involved and dilution factor of the bay. Screened IN for Harbour Seal.

Table 5.1. Initial screening of Natura 2000 sites and the Qualifying Interests within zone of influence

Special Areas of Conservation (SAC) with potential for significant effects	Special Protected Areas (SPA) with potential for significant effects
St John's Point (000191) Donegal Bay (Murvagh) SAC (000133)	Donegal Bay SPA (004145) 4km

Table 5.2 . Summary of Natura 2000 sites screened in for further assessment.

5.2 Summary of Natura 2000 sites

Detailed site synopses can be seen in appendix 1.

St. John's Point SAC (000191)

St. John's Point is a 10 km-long, narrow peninsula running south-west from Dunkineely into Donegal Bay. The site covers the most southerly 4 km of the peninsula and includes some of the surrounding marine waters. This site is important for its rich and diverse calcicole flora. A remarkable marine flora and fauna enhances the interest of the site, as does the presence of richly fossiliferous sea cliffs. Species-rich hay meadows and brackish marshes add diversity to the site.

Donegal Bay (Murvagh) SAC is situated in the inner part of Donegal Bay. It is an estuarine system; the inner bay is very sheltered, and represents the main estuarine intertidal area within the site, receiving water from a number of rivers and streams including the River Eske which flows out through Donegal Town and the Laghy River.

The SAC site has large expanses of intertidal sand and mud flats, channels, saltmarsh, sand dunes and sandy and shingle beaches. There are two separate dune systems located within the SAC: Mullanasole (Murvagh) and Mountcharles. It is also home to the harbour seal *Phoca vitulin*.

Donegal Bay SPA is larger than the SAC, approximately 15 km along its north-east/ south-west axis, with a width of 3 km to over 8 km. It provides extensive habitat for waterfowl. The inner bay has numerous small, grassy islands and areas of salt marsh. It has a diversity of marine biotopes and supports a range of macroinvertebrates and bivalves. Much of the shoreline is rocky or stony which varies from well-developed littoral reefs to shingle or cobble beaches. Donegal Bay supports an excellent diversity of wintering water-birds, especially species associated with shallow bays; it is considered to be of high ornithological importance. Two species have populations of international importance (Great Northern Diver and Light-bellied Brent Goose) and a further two species have populations of national importance (Common Scoter and Sanderling).

5.3 Conservation objectives

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. A site-specific conservation objective aims to define favourable conservation condition for a particular habitat or species at that site.

Favourable Conservation Status is defined by Articles 1(e) and 1(i) of the Habitats Directive as follows:

"The conservation status of a natural habitat is the sum of the influences acting on it and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species. The conservation status of a natural habitat will be taken as favourable when:

• its natural range and areas it covers within that range are stable or increasing; and

• the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; and

• the conservation status of its typical species is favourable'.

The conservation status of a species is the sum of the influences acting on the species that may affect the long-term distribution and abundance of its populations. The conservation status will be taken as 'favourable' when:

• the population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats; and

• the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future; and

• there is, and will probably continue to be, a sufficiently large habitat to maintain its populations."

5.3.1 Conservation objectives for St. Johns Point SAC (00191)

Terrestrial Conservation Objectives

[6210] Orchid-rich Calcareous Grassland*: To restore the favourable conservation condition of Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*);

[6410] *Molinia* Meadows: To restore the favourable conservation condition of *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*);

[7230] Alkaline Fens: To maintain the favourable conservation condition of Alkaline fens;

[8240] Limestone Pavement*: To maintain the favourable conservation condition of Limestone pavements.

Marine Conservation Objectives

[1160] Large Shallow Inlets and Bays: To maintain the favourable conservation condition of Large shallow inlets and bays;

[1170] Reefs: To maintain the favourable conservation condition of Reefs;

[8330] Sea Caves: To maintain the favourable conservation condition of Submerged or partially submerged sea caves;

Two additional qualifying interests have been included in St. John's Point SAC (00191) in recent years: [1230] Vegetated Sea Cliffs and [1065] Marsh Fritillary (*Euphydryas aurinia*). These have yet to be included in the Conservation Objectives documentation available on the National Parks and Wildlife portal, however they are included in the St. Johns Point site synopsis see Appendix 1. According to the site synopsis there is a colony of Marsh Fritillary butterfly on the peninsula. Its foodplant, Devil's-bit Scabious (*Succisa pratensis*), is common in the grass and heath vegetation and the colony present there is one of the best documented in Donegal. The National survey and assessment of the conservation status of Irish sea cliffs, state that the vegetated sea cliffs at St. John's point are at favourable conservation status.

5.3.2 Conservation objectives for Donegal Bay (Murvagh) SAC (00133)

Objective 1: To maintain the favourable conservation condition of Mudflats and Sandflats not covered by seawater at low tide in the Donegal Bay (Murvagh) SAC;

Objective 2: To maintain the favourable conservation condition of harbour seal in Donegal Bay (Murvagh) SAC;

Objective 3: To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation (grey dunes) in Donegal Bay (Murvagh) SAC;

Objective 4: To restore the favourable conservation condition of Humid dune slacks in Donegal Bay (Murvagh) SAC.

5.3.3 Donegal Bay SPA (004151)

Objective 1: To maintain the favourable conservation condition of Great Northern Diver, Light-bellied Brent Goose, Common Scooter and Sanderling in Donegal Bay SPA;

Objective 2: To maintain the favourable conservation condition of the wetland habitat in Donegal Bay SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.

5.3.4 Other Relevant Annex Species

Marine Mammals (Annex II and Annex IV) and other Megafauna

In Ireland, cetaceans (whale, dolphins and porpoises) as well as grey seals (*Halichoerus grypus*), harbour seals (*Phoca vitulina*) and the Eurasian Otter (*Lutra Lutra*) are protected under national and international legislation. To date 25 species of cetaceans have been recorded in Irish waters and the Grey Seal and Harbour/Common Seal are regularly occurring. Otter are frequently occurring around rivers, lakes and coastlines.

The Irish Whale and Dolphin Group operate an online validated database of cetacean sightings and other megafauna including basking sharks and sea turtles. Biodiversity Ireland has a data base of recorded Otter sightings.

Basking Shark, Bottlenose Dolphin, Harbour Porpoise, Common Dolphin and Minke Whale have all been recorded in the waters around Inver Bay, St. Johns Point and Donegal Bay within the past 10 years (IWDG, 2022). Otter has been recorded within Inver Bay (Biodiversity Ireland, 2023).

Atlantic Salmon (*Salmo Salar*) Annex II and Annex V

In Ireland the overall Status of Atlantic Salmon is assessed as Inadequate. Salmon use rivers to reproduce and as nursery areas. Eggs are deposited during the winter in a depression, called a redd, excavated in river gravels. The eggs develop protected within the substrate and during spring hatch into alevins, which in turn develop into fry. The fry feed for the summer and over the autumn, gradually becoming parr. Fry and parr feed primarily upon invertebrates. The Irish population generally comprises fish that spend two winters in freshwater before going to sea, in spring, as smolts at around 10-25cm in length. Adults spend one to three years at sea where growth rates are much greater. They feed upon crustaceans and fish (e.g. capelin and sandeels) as they migrate to feeding grounds in the North Atlantic. The majority of Irish fish spend one winter at sea before returning to their natal rivers, mainly during the summer, as grilse. Smaller numbers spend two or even three winters at sea, returning mainly in spring, hence "spring" salmon NPWS (2013). Populations of Salmon have stabilised over the years however Marine survival is of major concern.

The Eany River flowing into Inver Bay is a Salmonid river under IFI management. It is currently a catch and release fishery due to conservation limits not being reached. Generally on the Eany smolts leave from March to May and adults return to spawn from July to December (2023, *pers comm*., Gerry McCafferty, IFI, 03May).

5.4 Land use and activities in the area

Inver is a small village. It is situated on the Eany River which flows to the Sea at Inver Bay. Inver Bay is a designated Shellfish Water under the Shellfish Waters Directive. Current Licences in place are for Finfish (Salmon) and Shellfish (Blue Mussel) (Irelands Marine Atlas, 2022).There is currently a healthy and active fishing community operating from Port, Inver. Port Inver is home to up to 12 vessels actively engaged in many aspects of fishing from traditional sprat fishing to modern aquaculture and other species. The Eany River is an established Salmonid fishery which is managed by Inland Fisheries Ireland. The coastal area is a popular water-sports destination with activities including scuba diving and shore angling at St. Johns point. St. John's point is also an excellent vantage point for whale and dolphin watching. Inver is located along the Wild Atlantic Way.

5.5 Other plans/projects:

County Donegal Development Plan 2018- 2024: Policy NH-P-1 of the *County Donegal Development Plan 2018-2024* States the following:

"It is a policy of the Council to ensure that development proposals do not damage or destroy any sites of international or national importance, designated for their wildlife/habitat significance in accordance with European and National legislation including: SACs, Special SPAs, NHAs, Ramsar Sites and Statutory Nature Reserves"

Any existing/proposed plan or project that could potentially affect Natura 2000 sites, in combination with the proposed development, must adhere to this environmental policy. Any projects or plans within the zone of influence of the project will be required to carry out Stage 1 and/or stage 2 of the Appropriate Assessment process thereby ensuring protection of Natura 2000 sites.

At the time of writing there were no live planning applications pending within the immediate vicinity of the project. Applications within the past 10 years pertain to renovations and single dwellings with associated services set back from the pier area. A new slipway was constructed at the pier in 2022 and a sea wall is currently under construction. The slipway and wall were subject to Appropriate Assessment Screening and were screened out.

5.5.1 Water Framework Directive

The Water Framework Directive (WFD) obliges member states to manage their waters in an integrated and sustainable way. They must ensure that their waters achieve at least good status, generally by 2027 at the latest, and that current status doesn't deteriorate in any waters. To achieve good status and preserve the best waters, management plans have been prepared for districts around the country. Relevant projects underway as part of the implementation of this plan include:

Environmental Protection Agency (EPA) Monitoring Programme. The EPA is responsible for the monitoring of water quality around the country. Both chemical and ecological monitoring is undertaken by the EPA to ascertain water quality status.

5.5.2 International Union for the Conservation of Nature and Natural Resources (IUCN) Red Data Lists

IUCN Red Data Lists are a very important resource for conservation and protection of species and their habitats. Red Lists identify which species are in most danger, and categorise threatened species as follows: critically endangered (CR), endangered (EN), vulnerable (VU), near threatened (NT) or least concern (LC). Red lists are an internationally recognized system for highlighting species in danger.

5.5.3 Ramsar Sites

The Ramsar Convention is an international agreement for the conservation and wise use of wetlands. It is also known as the Convention on Wetlands and it is named after the city of Ramsar in Iran, where the Convention was signed in 1971. The Ramsar Convention (2010) defines wetlands as:

" areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres."

5.5.5 Foreshore Act as ammended

An act to make provision for the granting of leases and licences in respect of foreshore belonging to Saorstát Eireann and to amend generally the Law relating to foreshore and the seashore.

6.0 Site description (Fossitt description in brackets)

Port Pier is in the townland of Port, Inver, Co. Donegal, off the L-1565-2 local road, just off the main N56 national road. The site was visited on an outgoing tide, in sunny conditions on the 25th April 2023, see plates 1-4. The project site is located at and existing pier (CC1 Sea walls, piers and jetties) within Inver bay (MW2 sea inlets and bays). The beach surrounding area is a mosaic of sheltered rocky shores (LR3), mixed sediment shore (LS5) and stone walls (BL1). The upper shore is dominated

by serrated wrack (*Fucus serratus*). Rocks and boulders are scattered throughout the site. Construction of a sea wall along the recently constructed slipway, was underway at the time of the site visit, and rock armour had been removed to one side, this will be reinstated after works are complete (2023, *pers comm*. Paddy Curran, DCC on 25th April.) Looking from the pier, visibility in the water was clear showing a sandy bottom with some outcrop. There was a strong unpleasant smell.

Plate 1. Looking north from the existing pier.

Plate 2. Looking southwest up the new slipway towards site for extension.

Plate 3. Looking northeast towards existing pier, from site of proposed pier extension.

Plate 4. Looking east towards proposed dredge area from site of proposed extension.

6.1 Hydrology

Inver Bay is a substantial body of water directly connected to the Atlantic, there is a large tidal influx of seawater from the Atlantic into the Bay, with access to the pier is restricted at low tide. There appears to be a good hydroactive system, with good flushing capacity.

Water Framework Directive water status:

For the reporting period 2018 -2022 Coastal water quality status is unpolluted, as is the Eany Water Estuary (epa.ie). WFD status for Inver Bay is High and The Eany River (Eany _020) is classified as Good (catchments.ie).

7.0 Detailed project proposals as supplied by Ayesa Ltd.

Ayesa Ltd. (formerly known as Byrnelooby) has been recently appointed by Donegal Co Co as the Engineers for the design of the pier extension. Information was provided by DCC and Ayesa Ltd. describing how works will be implemented with site layout drawings, see figure 7.1 and 7.2. A construction management plan has been developed, see extract below:

"….The pier structure will consist of two parallel rows of sheet piles adequately tied back with tie-rods. Dredge material will be used as fill between the sheet piles. The top layer of fill will be selected engineered fill. The pier structure will be capped with a concrete deck.

The following sequence describes the construction of the Pier:

• Sheet piles will be driven into the seabed as shown on the drawings, using an excavator or crane fitted with a vibratory pile hammer (or similar).

• The sheet piles tie-back system will be installed, which will consist of a series of tie-rods and waling beams.

• The pier will be filled with material either from the dredging operation or selected fill imported from commercial sources.

• The fill will be compacted in layers (approximately 300mm) using a 5t roller (or similar).

• Selected engineering fill will be used in the top 900mm, to create a base layer for the concrete slab.

• The selected fill will be compacted in layers (approximately 300mm) using a 5t roller (or similar).

• A reinforced concrete capping slab will be constructed on top of the sheet piles and engineered fill. This will involve installing rebar cages, shuttering, and concrete casting.

• Quayside services such as lighting, drainage, and utilities shall be installed in accordance with relevant standards and regulations.

Considerations During Construction

All construction activities that have the potential to generate excessive noise or vibration shall be carried out during permitted hours. Noise levels shall be limited to:

• 75 DBA between 8.00hrs – 20.00hrs (Mon to Sat).

• 45 DBA for all other times.

….

Vibration monitoring shall be carried out during piling operations to ensure that vibration levels are kept within acceptable limits.

A dredge pocket will be created, as indicated on the drawings, using an excavator. The dredging operation will either be conducted in the dry during low water, or a barge will be required to support the excavator when the site is inundated with water.

The dredged/excavated material will be used as fill for the new pier extension, if suitable. Furthermore, the area behind the pier will also be reclaimed using the dredged material. The excavator will either dump the dredged material directly between the sheet piles, or it will be loaded onto tipper trucks for transportation. A hopper barge may be required to load and transport the material when the site is inundated. Approximately 3500m3 of material will be dredged.

If excess dredge material is available, or if the dredge material is unsuitable for use as fill, the material will be transported and disposed of at a suitable landside facility. The dredge material will first be stored in a bunded area and allowed to dry prior to transportation…."

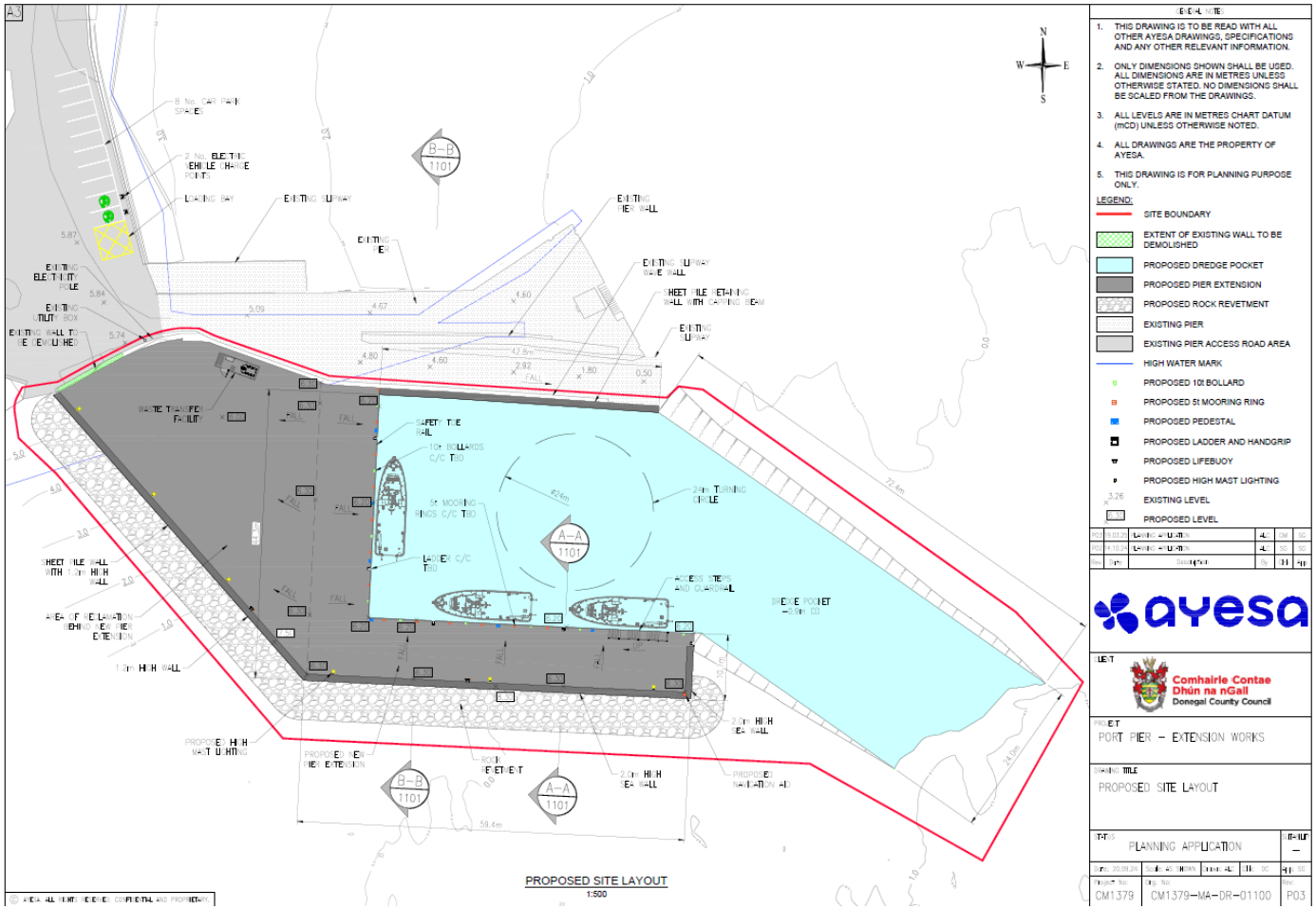

Figure 7.1. Proposed extension layout and dredging pocket, as supplied by Ayesa Ltd..

Figure 7.2. Proposed location of site compound to the north of the existing pier outlined in black.

Construction is anticipated to take place during 2024 / 2025 within a 6 month period.

8.0 Assessment of project proposal in terms of potential direct, indirect or cumulative impacts on Natura 2000 Sites.

Table 8.1 explores where there may be potential for the project to impact Natura Sites, their qualifying interests and other relevant Annex Species.

Attribute	Description	Potential Impact to Natura 2000 site / Effects on QI?
Size & Scale	Small area, extension works at existing Port pier, Inver. Total built area: 2,037m^2 Dredge area: 3,500m^3	No impact.
Land take	None, not in an Natura 2000 site or Annex habitat.	No impact.
Distance from the Natura 2000 site or key features of the site	St John's Point SAC (000191) 7km Donegal Bay SPA (004145) 4km Donegal Bay (Murvagh) SAC (000133) 6km Cetaceans, Otter *(Lutra lutra*) and other megafauna known to occur in the area. Atlantic Salmon migration path in Inver	Indirect impacts possible: Pollution during construction works. Mobilisation of sediments. Potential for release of contamination stored in sea bed. Noise disturbance /injury from works: piling and dredging.

	Bay to/from Eany River.	Potential effects on: Marine QI's as the integrity of these features is directly linked to water quality. Disturbance and displacement of QI and Annex species.
Resource requirements (water abstraction etc.)	No resource requirement.	No impact.
Emissions (disposal to land, water, or air)	Inadvertent release of pollutants during works possible. Noise and vibration. Invasive alien species (IAS).	Direct and Indirect impacts possible: Pollution/Contamination during construction and dredging works; Noise and vibration disturbance/ injury; Introduction of Invasive Alien Species (IAS). Potential effects on: St. John's Point SAC (Marine QI's only): Large shallow inlets and bays [1160] Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Submerged or partially submerged sea caves [8330] Donegal Bay SPA: Great Northern Diver (Gavia immer) [A003] Light-bellied Brent Goose (Branta bernicla hrota) [A046] Common Scoter (Melanitta nigra) [A065] Sanderling (Calidris alba) [A144] Wetland and Waterbirds [A999] Donegal Bay (Murvagh) SAC Phoca vitulina (Harbour Seal) [1365] Other relevant Annex species: Cetaceans Otter Pinnepeds Megafauna Salmonids
Excavation requirements	Reclamation of area beside existing pier. Dredging: 3500m3.	
Transportation requirements	30 tonne excavator Jack-up barge Pile driving rig 32-tonne tipper truck Concrete truck 5t roller Mobile crane Other minor plant	
Duration of construction, operation etc.	Short term project c. 6 month 2024 / 2025. Permanent fixture. Operation: Ongoing maintenance dredging is not proposed.	Impacts not anticipated. Once works are complete there will be no significant change in operational activity/use at the site.

Table 8.1. Project activity and the potential direct, indirect and cumulative impacts it may have.

9.0 Assessment of significance

As discussed in section 8, the threats of construction and dredging related pollutants, noise and vibration disturbance, and the potential introduction of Invasive Alien Species to qualifying interests are of greatest relevance in relation to the proposed project. This could result in habitat degradation and temporary displacement, injury or mortality (in the case of a pollution incident or a collision) of QI's and SCI's from the area.

Table 9.1 explores further the likely significance of the project and the potential impacts identified, in terms of disturbance to key species, habitat or species fragmentation, reduction in species density and changes in key indicators of conservation value, i.e. water quality.

9.1 Assessment of project proposal in terms of habitat loss, disturbance, fragmentation or reduction in species density:

Natura 2000 site & relevant Qualifying Interest	Potential impacts from the proposed development on the integrity of the Natura 2000 site, individually or in combination with other projects	Significance of Impact
St John's Point (000191) **Marine QI's ONLY** Large shallow inlets and bays [1160] Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Submerged or partially submerged sea caves [8330] **Donegal Bay SPA (004145)** Great Northern Diver (Gavia immer) [A003] Light-bellied Brent Goose (Branta bernicla hrota) [A046] Common Scoter (Melanitta nigra) [A065] Sanderling (Calidris alba) [A144] Wetland and Waterbirds [A999] **Donegal Bay (Murvagh) SAC (000133)** Phoca vitulina (Harbour Seal) [1365] Other relevant Annex species:	**Direct loss of habitat** There will be no direct loss of habitat within the Natura 2000 sites. None of the Qualifying Interest habitats of the SAC or SPA are present within the footprint of the development. There will be no direct loss of habitat for species using the area. The project proposal is outside the Natura 2000 sites.	No impact. No potential for significant effects.
	Indirect loss of habitat: A species may stop using a habitat due to increased disturbance or habitat degradation on site. **Construction:** **Habitat degradation due to hydrological impacts:** Marine habitats surrounding the proposed development site are potentially at risk from hydrological impacts arising from construction and dredging. Seabed features of conservation importance e.g. *Zostera*, maerl are located within St. John's Point SAC and are particularly sensitive to disturbance, smothering and pollution. **Water quality:** The construction period of the proposed development and dredging required could (if done incorrectly) result in physical pollution of the marine environment from suspended sediments or fuel spills from site run off entering the bay. Dredging could inadvertently release contaminants into the bay. This in turn could negatively impact on QIs of the SAC, the SCI's of the SPA, and other Annex species, as the integrity of these features is linked to water quality. **Operation:** Once the extension is complete there will be no significant change in use at the site.	Potential impact. Potential for significant effect on: St John's Point (000191): Marine QI's ONLY Large shallow inlets and bays [1160] Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Submerged or partially submerged sea caves [8330] Donegal Bay SPA (004145): Great Northern Diver (Gavia immer) [A003] Light-bellied Brent Goose (Branta bernicla hrota) [A046] Common Scoter (Melanitta nigra) [A065] Sanderling (Calidris alba) [A144] Wetland and Waterbirds [A999]

Natura 2000 site & relevant Qualifying Interest	Potential impacts from the proposed development on the integrity of the Natura 2000 site, individually or in combination with other projects	Significance of Impact
Cetaceans Pinnepeds Megafauna Salmonids Otter		Donegal Bay (Murvagh) SAC (000133): Phoca vitulina (Harbour Seal) [1365] Other relevant Annex species: Cetaceans Pinnepeds Megafauna Salmonids Otter
	Disturbance / Displacement: **Noise and vibration**: Construction-related disturbance and displacement of QI and SCI species could potentially occur within the vicinity of the proposed development. Piling and dredging activities are of particular relevance. <u>Waterfowl:</u> Donegal Bay SPA is designated for a large number of wintering waterfowl. The SPA is 4km away however it is likely that waterfowl could use this area for shelter and feeding grounds. The SPA is designated for wintering birds. Timing of works is unknown. For waterfowl, general construction-related disturbance effects would not be expected to extend beyond a distance of *c*. 300m, as noise levels associated with general construction activities would attenuate to close to background levels at that distance (Cutts *et al.*, 2009). Works are temporary in nature; it is reasonable to assume that during periods of low or no activity on site birds will continue to use the area. Works will not occur during the night therefore any potential roosting sites will not be disturbed. The wider area has a large expanse of alternative wetland habitats. Temporary effects of the project are unlikely to affect the conservation status of those species. <u>Donegal Bay (Murvagh) SAC, Phoca vitulina (Harbour Seal) [1365] and other</u>	Potential impact. Potential for significant effect on: Donegal Bay (Murvagh) SAC (000133): Phoca vitulina (Harbour Seal) [1365] Other relevant Annex species: Cetaceans Pinnepeds Megafauna Salmonids Otter

Natura 2000 site & relevant Qualifying Interest	Potential impacts from the proposed development on the integrity of the Natura 2000 site, individually or in combination with other projects	Significance of Impact
	Annex species: Harbour seals are opportunistic foragers that feed on a wide range of fish species and to a lesser extent on molluscs and crustaceans. Individual seals can travel tens of kilometres or more when foraging or moving between haul-out sites It is possible therefore that Harbour seal and other Pinnepeds frequent Inver Bay. If in close proximity to piling activity Temporary Threshold Shift and Permanent Threshold Shift (Temporary or permanent changes in hearing threshold) is a potential threat to marine mammals. Avoidance and behavioural changes are also a possibility. Given that piling noise is impulsive and loud, under suitable conditions, numerous marine mammals can potentially be at risk of masking and pinnepeds could also be affected by noise in the air (Todd *et al,* 2015). The Eany River is a Salmonid River, Atlantic Salmon (*Salmo Salar)* is an Annex II and V species. Atlantic Salmon is a migratory species with smolts leaving the Eany River in spring and adults returning to spawn in autumn. Salmonids and other migratory fish may be impacted by piling activities if they were to occur during migration activity. Otter**:** For mammal species such as Otter, disturbance effects would not be expected to extend beyond 150m (NRA, 2009). Otter are likely to commute along the coastline. Generally these largely nocturnal species are unlikely to be impacted by operational activities or noise during construction, because their movements are outside daylight hours, however if their resting sites are in close proximity to the pier noise and vibration could cause Otter to move away. There were no signs of Otter in the vicinity of the Pier or within a 250m radius of the site, however this should be resurveyed prior to works as Otter are transient in nature. **Operation** Once the extension is complete there will be no significant change in use at the site.	

Natura 2000 site & relevant Qualifying Interest	Potential impacts from the proposed development on the integrity of the Natura 2000 site, individually or in combination with other projects	Significance of Impact
	Habitat or Species fragmentation: Extension of existing structure, open to the Bay; no habitat or species fragmentation.	No potential for significant effects.
	Reduction in Species Density: Degradation of habitat due to hydrological impacts, noise and vibration could result in displacement of species from feeding areas, migration routes, cause auditory injury or direct mortality in the case of a pollution incident or collision, ultimately causing a reduction in species density. Introduction of invasive species disease or pathogens could reduce species density over the long term for sensitive marine and coastal habitats and Atlantic Salmon.	Potential impact. Potential for significant effect on: Donegal Bay SPA (004145) Great Northern Diver (Gavia immer) [A003] Light-bellied Brent Goose (Branta bernicla hrota) [A046] Common Scoter (Melanitta nigra) [A065] Sanderling (Calidris alba) [A144] Wetland and Waterbirds [A999] Donegal Bay (Murvagh) SAC (000133): Phoca vitulina (Harbour Seal) [1365] Other relevant Annex species: Cetaceans Pinnepeds Megafauna Salmonids Lamprey Otter

Natura 2000 site & relevant Qualifying Interest	Potential impacts from the proposed development on the integrity of the Natura 2000 site, individually or in combination with other projects	Significance of Impact
	In combination: There are no other planning applications pending at the time of writing. Any other future projects will be subject to Appropriate Assessment. There are a number of active aquaculture licences in Inver Bay. Works are small relative to Inver Bay and temporary; potential for cumulative effects if sedimentation or pollution incident were to occur.	Potential impact: Potential for significant effect on St. Johns Point SAC: Large shallow inlets and bays [1160] contain seabed features of conservation importance.

Table 9.1 . Likely significance of impacts.

9.2 Cumulative Impacts

The potential for cumulative impacts to arise from the project proposal is regulated and controlled by the environmental policies and objectives of the Donegal County Council; policy NH-P-1 of the *County Donegal Development Plan 2018-2024 s*tates the following:

"It is a policy of the Council to ensure that development proposals do not damage or destroy any sites of international or national importance, designated for their wildlife/habitat significance in accordance with European and National legislation including: SACs, Special SPAs, NHAs, Ramsar Sites and Statutory Nature Reserves"

Any existing/proposed plan or project that could potentially affect Natura 2000 sites, in combination with the proposed development, must adhere to the overarching environmental policies of the County Development Plan and Local Area Plans. These policies will ensure the protection of the Natura 2000 sites within the zone of influence of the proposed project and include the requirement for any future plans or projects to undergo Screening for Appropriate Assessment and/or Appropriate Assessment (NIS) to examine and assess their effects on Natura 2000 sites, alone and in combination with other plans and projects.

There are no other planning applications pending at the time of writing. Any other future projects will be subject to Appropriate Assessment.

The Department of Agriculture Food and the Marine is responsible for the monitoring and issuing of aquaculture licences. There are a number of active aquaculture licences in Inver Bay. Proposed works are small relative to Inver Bay and temporary in nature; there is some potential for cumulative effects during the construction phase if sedimentation or a pollution incident were to occur. Any future developments within or outside the Bay will be subject to Appropriate Assessment by the relevant competent authority.

10.0 Conclusion

Donegal County Council is applying for a Foreshore Licence and planning permission to extend the pier at Port Pier, Inver. Natura 2000 sites within the zone of influence of the project were assessed. The project is not within a Natura 2000 site, however a hydrological and acoustic link is considered to exist with St John's Point SAC (000191), Donegal Bay SPA (004145), Donegal Bay (Murvagh) SAC (000133) , as well as with other Annex species frequenting the bay.

A site visit was carried out on 25 April 2023 and a desk study completed using existing available data for the site.

The project has been assessed in terms of the likely impacts the proposal may have on the Natura 2000 sites in the area. The significance of impacts identified has been determined. It has been determined that, although the project works will be temporary and relatively small in the wider context of the marine environment, in the absence of mitigation, the project may pose a risk to: marine habitats, the conservation objectives of St John's Point SAC (000191), Donegal Bay SPA (004145), Donegal Bay (Murvagh) SAC (000133) and other Annex species occurring the bay.

Potential impacts pertain to the construction phase to include the following:

- Habitat degradation due to hydrological impacts
- Disturbance and displacement of QI species and other Annex species
- Reduction in species density of QI species and other Annex species
- Introduction of Invasive Alien Species

This report presents a Stage 1 Appropriate Assessment Screening outlining the information required for the competent authority to screen for appropriate assessment and to determine whether or not the project, either alone or in combination with other plans and projects, in view of best scientific knowledge, is likely to have a significant effect on any Natura 2000 site.

The Competent Authority has been provided with information to conduct a Stage 1 Screening for Appropriate Assessment and consider whether, in view of best scientific knowledge and in view of the conservation objectives of the relevant Natura 2000 sites, the Project, individually or in combination with other plans or projects is likely to have a significant effect on any Natura 2000 site.

It can be objectively concluded that there is a possibility of significant impacts on the following Natura 2000 sites: St John's Point SAC (000191), Donegal Bay SPA (004145), Donegal Bay (Murvagh) SAC (000133), their features of interest and site specific conservation objectives, as well as with other Annex species occurring in the bay.

Stage 2 of the Appropriate Assessment process (Natura Impact Statement) is required.

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Appendix 1 Natura 2000 Site Synopses

Site name: St. John's Point SAC

Site Ccde: 000191

St. John's Point is a 10 km-long, narrow peninsula running south-west from Dunkineely into Donegal Bay. The site covers the most southerly 4 km of the peninsula and includes some of the surrounding marine waters. The underlying geology is limestone. Tournaisian Basal Clastics form the majority of the underlying rocks, while Calp limestone of the Visean era outcrop at the south-western end of the site.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

[1160] Large Shallow Inlets and Bays

[1170] Reefs

[1230] Vegetated Sea Cliffs

[6210] Orchid-rich Calcareous Grassland*

[6410] *Molinia* Meadows

[7230] Alkaline Fens

[8240] Limestone Pavement*

[8330] Sea Caves

[1065] Marsh Fritillary (*Euphydryas aurinia*)

The grassland on the Calp limestone occurs on an undulating topography of low ridges with outcropping rocks and 'V' shaped valleys with peaty formations. The exposed limestone forms pavement where some unusual plants are found including Bloody Cranesbill (*Geranium sanguineum*), Northern Bedstraw (*Galium boreale*), Stone Bramble (*Rubus saxatilis*), Blue Moor-grass (*Sesleria albicans*) and English Hawkweed (*Hieracium anglicum*). More abundant plants on the thin soils and rocky clefts include Mountain Everlasting (*Antennaria dioica*), Broad-leaved Marsh-orchid (*Dactylorhiza majalis*), Burnet Rose (*Rosa pimpinellifolia*), Common Knapweed (*Centaurea nigra*) and Heath Spotted-orchid (*Dactylorhiza maculata*). On the steep slopes of the valley side, Blackthorn (*Prunus spinosa*), Bramble (*Rubus fruticosus* agg.) and Red Fescue (*Festuca rubra*) are abundant.

The wet valley bottoms contain flushes rich in Bogbean (*Menyanthes trifoliata*), Common Cottongrass (*Eriophorum angustifolium*), Marsh-marigold (*Caltha palustris*), Lesser Spearwort (*Ranunculus flammula*), Grass-of-parnassus (*Parnassia palustris*) and Common Scurvygrass (*Cochlearia officinalis*). Heathy areas have developed on thin, peaty soils near the end of St. John's Point. Heather (*Calluna vulgaris*), Creeping Willow (*Salix repens*), Lousewort (*Pedicularis sylvatica*),

Sweet Vernal-grass (*Anthoxanthum odoratum*) and Glaucous Sedge (*Carex flacca*) are all abundant. Dense swards of Buck's-horn Plantain (*Plantago coronopus*) also occur in this region.

Species-rich hay meadows are included within the site. Heath Spotted-orchid, Common Twayblade (*Listera ovata*), Common Spotted-orchid (*Dactylorhiza fuchsii*), Meadow Thistle (*Cirsium dissectum*), Primrose (*Primula vulgaris*), Yellow-rattle (*Rhinanthus minor*) and Ragged-Robin (*Lychnis flos-cuculi*) are all abundant meadow plants. Red Fescue and Sweet Vernal-grass are the dominant grasses.

Areas of *Molinia* meadow exist in the site, with Purple Moor-grass itself being a common component. Common Spotted-orchid (*Dactylorhiza fuchsii*), Early Marsh-orchid (*D. incarnata*) and Heath Spotted-orchid (*D. maculata*) have all been recorded in this habitat type at the site. Although relatively fragmented, and small in area, alkaline fen also exists at this site. It is not particularly species-rich, but the various areas support a good diversity of vegetation communities, and the habitat is generally undisturbed and mostly intact.

Brackish marshes, which are inundated with sea water during storms, occur within the site. Common Reed (*Phragmites australis*), Bottle Sedge (*Carex rostrata*), Thread-leaved Water-crowfoot (*Ranunculus trichophyllus*) and Bogbean are all abundant species here.

There is a colony of the E.U. Habitats Directive Annex II and red-listed Marsh Fritillary butterfly on the peninsula. Its foodplant, Devil's-bit Scabious (*Succisa pratensis*), is common in the grass and heath vegetation and the colony present there is one of the best documented in Donegal.

The marine component of this site is estimated at 64% of the site area, with 40% marine waters and 24% rocky shore/intertidal zone. The former falls largely within the E.U. Habitat 'Large shallow inlets and bays'.

The exposed bedrock shore and sea cliffs are outstanding features of the site. The rocks are richly fossiliferous. Some sections of the shore have a limestone pavement-type structure with Common Scurvygrass, Thrift (*Armeria maritima*), Sea-milkwort (*Glaux maritima*), Red Fescue and Buck's-horn Plantain growing in the rock clefts. The sea cliffs can reach heights of up to 20m and are composed of Carboniferous limestone with a series of crevice ledges and a splash zone. Typical species known from the cliffs include Thrift*, S*ea Spleenwort (*Asplenium marinum*)*,* Common Scurvygrass*,* Sea Plantain (*Plantago maritima*)*,* Buck's-horn Plantain*,* Sea Campion (*Silene maritima*), Rock Sea-spurrey (*Spergularia rupicola*), Sea Mouse-ear (*Cerastium diffusum*), Red Fescue and the lichens *Xanthoria parietina* and *Verrucaria* sp. The subtidal reefs at this site comprise one of the best examples of reef habitat in the country. The reefs range from being vertical cliff faces with overhangs and small caves to gently sloping from horizontal platforms to large or medium sized boulders. In some areas sand overlies the bedrock. They are exposed to moderate wave action. There is a well developed kelp forest of *Laminaria hyperborea* extending to 19 m depth with an understorey of diverse foliose red algae. *Delesseria sanguinea* and *Cryptopleura ramosa* are most abundant, and *Odontalia dentatum* occurs occasionally in the lower part of the forest. The latter is a northern species that is uncommon and has not been recorded any further south than Co. Mayo. The most conspicuous fauna are starfish (*Asterias rubens*)*,* sea urchins (*Echinus esculentus*), sea cucumbers (*Holothuria forskali*) and the massive sponges *Cliona celata* and *Pachymatisma johnstonia.*

In the shallow water between 18 and 27 m there is a community characterised by a variety of red foliose algae including *Delesseria sanguinea* and *Bonnemaisonia asparigoides,* with occasional *Dictyota dichotoma*. Below 27 m the boulders are characterised by a community of hydroids, sponges and bryozoans. The cup coral *Caryophyllia smithii* is abundant, and both soft corals *Alcyonium digitatum* and *Alcyonium glomeratum* are occasional. On horizontal bedrock overlain by sand at 20 – 24 m there is a community comprising erect sponges, as well as the sea fan *Eunicella verrucosa* and the bryozoan *Pentapora foliacea*; here the sponges *Ciocalypta penicillus* and *Sphaerotyllus* sp. are common, and *Raspailia hispida* occasional. *Phakalia vermiculata* is also recorded in this community; this has only recently been recorded from shallow water where it is uncommon and is the most northerly shallow water record for this species. A second community influenced by sand scour and characterised by cushion sponges and *Ciocalypta penicillus* occurs at 18 – 20 m. The hydroid *Nemertesia antennina* and anthozans *Isozoanthus sulcatus* and *Epizoanthus couchii* are frequent. The hydroid *Corymorpha nutans* is common in this community, while the anemone *Aureliana heterocera,* an uncommon species in Ireland, is rare. A third community characterised by cushion sponges and hydroids occurs on gently slopping bedrock that rises out of a sand plain at 25 m. The crevice dwelling species of brittlestar, *Ophiactis balli,* and the sea cucumber *Aslia lefevrei* are also present.

A community of erect sponges with the sea fan *Eunicella verrucosa* and the sea slug *Tritonia nilsodhneri* occurs between 21 and 27 m. The soft corals *Alcyonium digitatum*, *Alcyonium glomeratum* and the tunicate *Diazona violacea* are all frequent and the gastropod *Gastrochaena dubia* is common. *Eunicella verrucosa* and the sea slug *Tritonia nilsodhneri* are close to their northern limits in north Donegal Bay.

An example of the deep water Axinellid sponge community occurs at 46 m on horizontal bedrock with raised ridges, with the Axinellid sponge occurring on the flat surfaces and the soft corals *Alcyonium digitatum*, *Alcyonium glomeratum* and the massive sponge *Pachymatisma johnstonia* on the ridges. The deepwater starfish *Stichastrella rosea* is frequent and the rare bryozoan *Reteporella beaniana* and uncommon anthozoan *Parazoanthus anguicomus* are found in this community.

The vertical cliff with ledges, overhangs and small caves show zonation from 6 - 21 m. Red foliose algae occur on the ledges, with the jewel anemone *Corynactis viridis* being common at the top of the cliff and the cup coral *Coryophyllia smithii* common at the base. On the cliff under the overhang the anthozoan *Parazoanthus axinellae* and the sponge *Biemna variantia* occur. *Parazoanthus axinellae* reaches its northern limits in north Donegal Bay. An Axinellid sponge community is present on the ledges. The habitat is species-rich, with 93 species recorded.

There is an excellent fish community associates with the reefs.

Small marine caves are present in the cliff face described above and in areas of terraced bedrock with ledges and crevices. The caves support the soft coral *Alcyonium glomeratum* on the roof and the sea fan *Eunicella verrucosa* on the floor.

The subtidal sediments occur between 28 and 38 m depth and range from duned maerl gravel and live maerl to coarse sand to fine sand. A flat sandy plain is characterised by the burrowing sea cucumber *Neopentadactyla mixta*, the burrowing sea urchins *Spatangus purpureus* and *E. flavescens,* the sand mason worm *Lanice conchilega*, and the bivalves *Dosinia exoleta* and *Moerella*

donacin. The latter is an uncommon species. An area of coarse rippled sand, with the sea urchin *Echinocardium cordatum* and unidentified polychaete tubes, is present at the base of a reef.

Two areas of maerl occur on the east side of St. John's Point. One is an area of duned maerl gravel with live *Lithothamnion corallioides* in the hollows. Numerous crustaceans are present, in particular *Atelycyclus rotandatus, Ebalia tuberosa*, and *Pisidia longicornis* and the northern starfish *Luidia sarai*. In deeper water high dunes of maerl gravel and live *Lithothamnion corallioides* occur and are characterised by the burrowing sea urchins *Spatangus purpureus, Echinocardium pennatifidium* and *E. flavescens*, the bivalves *Clausinella fasciata* and *Garia tellinella* and abundant small crustaceans including *Galathea intermedia* and *Liocarcinus marmoreus*.

A small rocky islet occurs close to the south end of the point. A Herring Gull colony occurs here. Other birds seen feeding around the coast include Fulmar, Greater Black-backed Gull, Cormorant and Gannet. The freshwater marshes and rushy fields hold Snipe, Lapwing and Ringed Plover. The brackish lakes are frequented by Shelduck, Mallard, Mute Swan and Grey Heron.

The main land uses within the site are grazing of cattle and sheep near the end of the peninsula, while small hay meadows are maintained further north-east. Diving and fishing are frequent activities around the Point.

This site is important for its rich and diverse calcicole flora. A remarkable marine flora and fauna enhances the interest of the site, as does the presence of richly fossiliferous sea cliffs. Species-rich hay meadows and brackish marshes add diversity to the site.

Site name: donegal bay spa

Site code: 004151

Donegal Bay SPA is a very large, marine-dominated, site. It extends from Doorin Point, to the west of Donegal Town, to Tullaghan Point in County Leitrim, a distance of approximately 15 km along its north-east/south-west axis. It varies in width from about 3 km to over 8 km. The site includes the estuary of the River Eske, which flows through Donegal Town, and the estuary of the River Erne, which flows through Ballyshannon. Much of the shoreline is rocky or stony, with well-developed littoral reefs in places. There are also extensive stretches of sandy beaches, especially from the Murvagh peninsula southwards to Rossnowlagh and at the outer part of the estuary of the River Erne. Shingle or cobble beaches are also represented. There are extensive areas of intertidal flats associated with the estuary of the River Eske, reflecting the very sheltered conditions in this part of the bay. These have been shown to be biotope rich, and supporting a range of macro-invertebrates, including polychaete worms (*Hediste diversicolor*, *Arenicola marina* and *Nephtys hombergii*) and bivalves (*Scrobicularia plana*, *Cerastoderma edule* and *Macoma balthica*).

Elsewhere, a narrow fringe of intertidal flats is exposed at low tides. Salt marshes are found in the sheltered conditions of the innermost part of the bay. A number of small, grassy, islands occur in the innermost part of the bay. The waters of the shallow bay overlie mostly sandy substrates, though reefs occur in places.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Great Northern Diver, Light-bellied Brent Goose, Common Scoter and Sanderling. The E.U. Birds Directive pays particular attention to wetlands, and as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

Donegal Bay supports an excellent diversity of wintering waterbirds, especially species associated with shallow bays (all figures are mean peak counts for four of the five winters between 1995/96 and 1999/2000). It has an internationally important wintering population of Great Northern Diver (138) and is consistently one of the top sites in the country for this species. It also has one of the few regular populations of Black-throated Diver in the country (11), and Red-throated Diver (21). It supports an internationally important population of Light-bellied Brent Goose (207) and nationally important populations of Common Scoter (860) and Sanderling (68). A range of other species associated with estuarine and shoreline habitats occurs at the site, including Cormorant (29), Shelduck (24), Wigeon (224), Mallard (100), Long- tailed Duck (14), Red-breasted Merganser (38), Oystercatcher (581), Ringed Plover (99), Golden Plover (103), Lapwing (122), Dunlin (269), Bar-tailed Godwit (49), Curlew (359), Redshank (93), Greenshank (12) and Turnstone (53). Gulls are regular in autumn and winter, especially Black-headed Gull (239) and Common Gull (297). This large coastal site is of high ornithological importance, with two species having populations of international importance (Great Northern Diver and Light-bellied Brent Goose) and a further two species having populations of national importance (Common Scoter and Sanderling). Also of note is that five of the regularly occurring species are listed on Annex I of the E.U. Birds Directive, i.e. Great Northern Diver, Black-throated Diver, Red-throated Diver, Golden Plover and Bar-tailed Godwit.

Site name: Donegal Bay (Murvagh) SAC

Site code: 000133

This site occupies the inner part of Donegal Bay, immediately to the south-west of Donegal Town. It contains the estuary of the River Eske and a number of other significant rivers. The area is underlain by Carboniferous limestone and shale, although blown sand and other recent deposits obscure much of the solid geology.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

[1140] Tidal Mudflats and Sandflats

[2130] Fixed Dunes (Grey Dunes)*

[2170] Dunes with Creeping Willow

[2190] Humid Dune Slacks

[1365] Common (Harbour) Seal (*Phoca vitulina*)

Most of the site consists of intertidal habitats, notably mud- and sandflats, sea inlets and bays, tidal rivers, estuarine channels and sandy beaches. These areas are generally unvegetated but are obviously nutrient-rich, as extensive beds of shellfish occur in parts of the bay. The following macro-invertebrate species are common throughout much of the bay: *Arenicola marina, Hediste diversicolor, Scrobicularia plana* and *Macoma balthica.*

Along some parts of the shore, saltmarsh has developed. Dominant plants there include Thrift (*Armeria maritima*), Red Fescue (*Festuca rubra*) and Common Scurvygrass (*Cochlearia officinalis*). Sea Arrowgrass (*Triglochin maritima*), Sharp Rush (*Juncus acutu*s) and Saltmarsh Rush (*J. gerardi*) are also common, while brown seaweeds (*Fucus* spp.) are abundant lower down the shore profile.

On the stable parts of some of the shingle and boulder beaches, Common Scurvygrass also occurs, along with Silverweed (*Potentilla anserina*) and Sea-milkwort (*Glaux maritima*).

Sand dunes, including fixed dunes, occur in parts of the site, especially at Murvagh. Intact sections contain Sea Sandwort (*Honkenya peploides*) and Marram (*Ammophila arenaria*) in the young dunes, with abundant Marram in the fixed dunes. These stable areas are frequently species-rich, with abundant Field Wood-rush (*Luzula campestris*), a well-developed moss community including *Thuidium tamariscinum* and *Rhytidiadelphus squarrosus*, and herbs such as Common Bird's-foot-trefoil *corniculatus*), Wild Thyme (*Thymus praecox*), Heath Dog-violet (*Viola canina*) and Lady's Bedstraw (*Galium verum*). Dune slacks also occur and in one slack the Red Data Book species Round-leaved Wintergreen (*Pyrola rotundifolia*) occurs. Typical species of dunes with Creeping Willow occur at Mullanasole and include: Creeping Willow (*Salix repens*), Sand sedge (*Carex arenaria*), Red Fescue, Lady's Bedstraw, Common Bird's-foot-trefoil and Mouse-ear Hawkweed (*Pilosella officinarum*) along with other typical species of fixed dune including: False Oat-grass (*Arrhenatherum elatius*), Selfheal (*Prunella vulgaris*), Wild Thyme and the mosses *Hypnum cupressiforme*, *Rhytidiadelphus triquetrus*

and *Rhytidiadelphus squarrosus*. The Common Twayblade orchid (*Listera ovata*) occurs throughout this habitat. Other species present include: Creeping Bent (*Agrostis stolonifera*), Marram Grass and the moss *Pleurozium schreberi*.

Both Common Scoter and Brent Goose are found in the greater Donegal Bay area, from Bundoran north to Murvagh. The Bay provides one of the most important sites in the country for the Common Scoter, with peak numbers of approximately 1,500 individuals in 1984/85 - 1986/87. This species uses large wintering grounds making counts difficult, but in recent years peaks of 662 birds (1995/96) and 1,073 birds (1997/98) have been recorded in the area. Other wintering species of note from the site include Ringed Plover 175, Oystercatcher 119 and Dunlin 221 (data based on 18 counts from 1984/85 - 1986/87). Small numbers (up to 50) of Greenland White-fronted Goose from the Pettigo flock fed at Inishpat Island in the 1980s, but have rarely done so in recent years.

The site supports a population of Common Seal (maximum count of 148 in the all-Ireland survey of 2003). This species is listed on Annex II of the E.U. Habitats Directive.

Land use in the area consists of boating and fishing in the bay, with a little shellfish aquaculture. Grazing occurs on terrestrial habitats, while recreational pressures are severe on parts of the dunes. A large part of the dune system is excluded from the site due to its development as a golf course and to the presence of conifer plantations. Despite these pressures, the site is of international importance due to the presence of a wide range of habitats, including four listed on Annex I of the E.U. Habitats Directive, an important seal colony and the occurrence of significant bird populations.